

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
10 June 2004 (10.06.2004)

PCT

(10) International Publication Number
WO 2004/047566 A1

(51) International Patent Classification⁷: A23L 1/305, 1/09, 1/29, 1/30, A61P 1/16, 29/00, A61K 31/7016, 35/20

(21) International Application Number:
PCT/JP2003/014918

(22) International Filing Date:
21 November 2003 (21.11.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2002-339948 22 November 2002 (22.11.2002) JP

(71) Applicant (for all designated States except US): MEIJI DAIRIES CORPORATION [JP/JP]; 2-10, Shinsuna 1-chome, Koto-ku, Tokyo 136-8908 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): KUME, Hisae [JP/JP]; c/o NUTRITION SCIENCE INSTITUTE, MEIJI DAIRIES CORPORATION, 540, Naruda, Odawara-shi, Kanagawa 250-0862 (JP). YAMAGUCHI, Makoto [JP/JP]; c/o NUTRITION SCIENCE INSTITUTE, MEIJI

DAIRIES CORPORATION, 540, Naruda, Odawara-shi, Kanagawa 250-0862 (JP). MIZUMOTO, Kenji [JP/JP]; c/o NUTRITION SCIENCE INSTITUTE, MEIJI DAIRIES CORPORATION, 540, Naruda, Odawara-shi, Kanagawa 250-0862 (JP). SASAKI, Hajime [JP/JP]; c/o NUTRITION SCIENCE INSTITUTE, MEIJI DAIRIES CORPORATION, 540, Naruda, Odawara-shi, Kanagawa 250-0862 (JP).

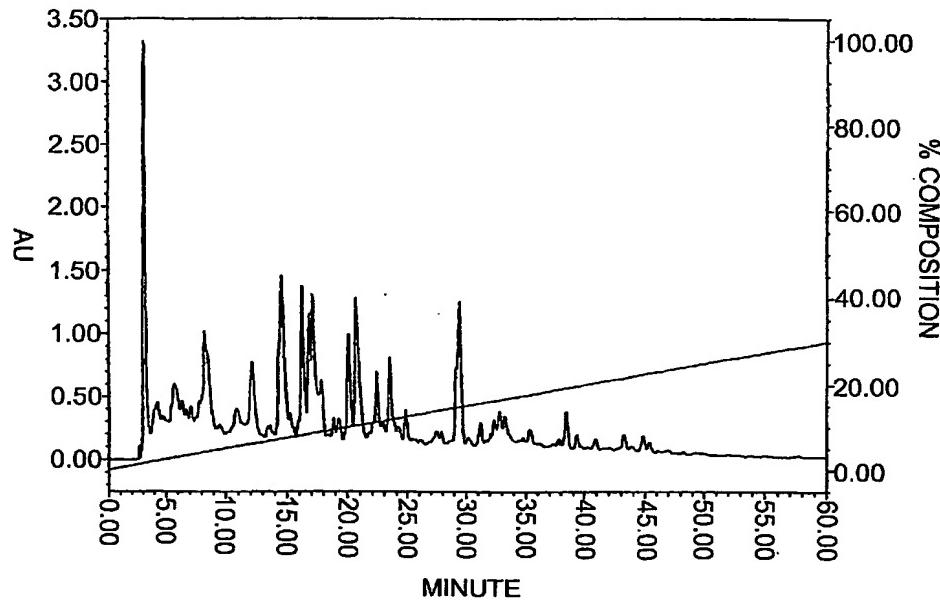
(74) Agents: SHIMIZU, Hatsushi et al.; Kantetsu Tsukuba Bldg. 6F, 1-1-1, Oroshi-machi, Tsuchiura-shi, Ibaraki 300-0847 (JP).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),

[Continued on next page]

(54) Title: NUTRITIONAL COMPOSITIONS



WO 2004/047566 A1

(57) **Abstract:** The present inventors discovered that the onset of galactosamine hepatopathy is suppressed by nutritional compositions comprising as essential ingredients: whey protein hydrolysates; lecithin and oils and fats high in oleic acid, which are able to improve the lipid metabolism; and palatinose having an insulin-sparing effect. Furthermore, the whey protein hydrolysate included in the nutritional compositions was found to suppress endotoxin-induced TNF- α and interleukin 6 (IL-6) production in macrophages.



Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— *with international search report*